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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF CALIFORNIA

SAN LUIS & DELTA-MENDOTA WATER
AUTHORITY,

Plaintiff,

v.

PIXLEY IRRIGATION DISTRICT, et
al.,

Plaintiffs-in-
Intervention

v.

UNITED STATES OF AMERICA, et
al.,

Defendants.

CV-F-97-6140 OWW
CV-F-98-5261 OWW

MEMORANDUM AND ORDER RE
INCLUSION OF THE MODIFIED
D-1400 FLOWS IN THE CVPIA
DEFINITION OF "CVP YIELD"
AND INTERIOR'S DISCRETION
AS TO INTERPRETATION AND
IMPLEMENTATION OF CVPIA §
3406(b)(2); MOTIONS RE
PRELIMINARY INJUNCTION

I. INTRODUCTION

This matter is before the Court as part of proceedings on Plaintiff Authority's motion for preliminary injunction.

Two issues are in dispute: 1) whether the "Interim Decision of Implementation of Section 3406(b)(2) of the Central Valley Project Improvement Act," dated July 14, 1999, issued by Interior calculates "CVP yield" in accordance with the statute, and 2)

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what amount of CVP yield has been and will be used for Section 3406 (b) (2) purposes in the 1999-2000 water year. Evidence was taken July 29, 1999 at a one-day hearing. A December 20, 1999 opinion ordered the preliminary injunction remain in effect and resolved all sub-issues as to the definition of "CVP yield" except for two: 1) what bearing does Interior's historical approach to defining "firm yield" have on the statutory definition of "CVP yield," and 2) whether the deductions Interior made from the base "CVP yield" figure for the lower American River flows (known as "modified D-1400 flows") were appropriate. The parties submitted additional briefing. The information provided at the hearing was not sufficient to permit decisions on all issues. An impartial expert witness was appointed under Fed. R. Evid. 706: Dr. Jay R. Lund, Professor, Department of Civil and Environmental Engineering, University of California, Davis. See Doc. 300; Lund Ex. 1. Seven questions were propounded to the 706 expert, which were formulated with participation of the parties. A second evidentiary hearing was held January 31, and February 3, 2000.

II. BACKGROUND

A. CVP Yield

At issue is interpretation of the Central Valley Project Improvement Act ("CVPIA"), Pub. L. No. 102-575, § 3406(b) (2), 106 Stat. 4600, 4700, et seq. (1992), definition of "CVP yield:" the delivery capability of the Central Valley Project

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during the 1928-1934 drought period after fishery, water quality, and other flow and operational requirements imposed by terms and conditions existing in licenses, permits, and other agreements pertaining to the Central Valley Project under applicable State or Federal law existing at the time of enactment of this title have been met.

CVPIA, Pub. L. No. 102-575, § 3406(b)(2), 106 Stat. 4600, 4716

(1992). "Yield" is:

a long-used planning concept indicating the quantity of water or power that can be delivered by a water system to an assumed pattern of demand.

Lund Ex. 1 at 2. An estimation of yield is important for:

sizing facilities, assessing the ability to serve future demands, improving long-term operating policies, and other planning purposes.

Id. Dr. Lund discusses the distinction between two types of yield estimates, referred to as "firm yield" and "yield-reliability." "Firm yield" calculates the amount of water "that could be delivered without interruption at a single demand location for a repeat of the historical inflows to a single reservoir." Id.

As with all engineering calculations, "firm yield" calculations are subject to a variety of local assumptions regarding historical inflows, storage and conveyance capacities, initial storages, operating policies (e.g., flood control, minimum flows, and senior or junior water users), losses due to seepage or evaporation, and expected seasonal patterns of demand.

Id.

Firm yield is no longer the optimum measure for planning future water use:

In recent decades, the limitations of "firm yield" have been increasingly evident, especially in water-short areas such as California. "Firm yield" concepts have

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been supplemented and sometimes replaced by a smaller reliability-based notion of yield, representing the variability of water quantities available for delivery to particular water users under the range of hydrologic conditions.

Id.

A second estimate, "yield-reliability," "now appears to be the most common notion for both the Federal CVP and State SWP systems (DWR 1998, p. 3-45; USBR 1997 p. IV-8)." Id. A yield-reliability approach involves probability, in an attempt to provide water planners and managers "with a representative idea of how frequently various quantities of water will be available for use." Id. Dr. Lund quotes a contemporary commentator's reflections on the two yield estimation methods: "Since firm yield can never be determined with certainty, it is better to treat yield in probabilistic terms." Id. at 3 (quoting RAY K. LINSLEY, ET. AL., WATER RESOURCES ENGINEERING 188-89 (1992)).

Dr. Lund testified that systems with multiple reservoirs, multiple users, and multiple demand locations require much more sophisticated and complex yield analysis. Loading and timing are important in systems such as the CVP, with several demand locations, delivery allocation rules and return flows. See Lund Ex. 1 at 3. Dr. Lund opined that "the definitions, assumptions, and calculation methods used for yield studies tend to evolve over time. This can be seen from any sequence of historical 'yield' studies for any major water project, including the CVP (USBR 1994)" Lund Ex. 1 at 3.

Historically, "CVP firm yield" was defined as the sum of

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Sacramento River Basin, American River Basin, and Delta Export CVP water delivery requirements, plus the "incremental supply." See Doc. 304, at 2. To determine a figure for "incremental supply," Interior added the minimum pool requirements for the Shasta, Folsom, and Trinity reservoirs, then subtracted the lowest cumulative storage that would occur during the 1928-34 period, and divided this number by the number of years it took to reach the lowest cumulative storage. See *id.* To determine delivery requirements, Interior started by examining the 1928-34 hydrologic records for the American, Sacramento, and Trinity river basins. See *id.* Assuming a fixed future level of land use, flows into reservoirs and non-regulated flows into rivers were determined on a month-by-month basis for every month of the 1928-34 period. See *id.* Then, deliveries and instream flow requirements were determined. See *id.* For the four years during the 1928-34 period classified as "critically dry" by the Shasta Criteria index, the amount of instream flows and contracted water deliveries were reduced by 25 percent. See *id.* It was assumed that water would be released from the reservoirs to: 1) meet instream flow and water quality requirements; 2) meet CVP urban and agricultural contract delivery obligations in the Sacramento and American River basins; and 3) comply with flood control criteria. See *id.* Then, Interior evaluated whether in-Delta water use and Delta water quality objectives would be met by the above releases or uncontrolled streamflow. It was assumed that if water was needed to meet these latter objectives, such water

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would be released, taking into account the defined CVP-SWP split of responsibility for making such releases. See *id.*

This "historic" approach was used to estimate CVP firm yield in 1940, 1949, 1955, 1959, 1960, 1967, 1982, and 1988. See Doc. 304 at 3. The historical method was last used by the Bureau of Reclamation in 1988 to calculate CVP firm yield. See USBR 1994 Report, Lund Ex. 2 at 1-10.

The Bureau's 1994 report states that the "historic" approach is a holdover from "pre-computer analysis concepts," USBR 1994 Report, Lund Ex. 2 at 2-1, to estimate "water supply made available through the operation of project facilities in accordance with entitlements under water rights permits and applicable laws, contracts and agreements," USBR 1994 Report, Lund Ex. 2 at 1-1. Dr. Lund reported that a "firm yield" study would also be used "as part of a general strategy of operating rules for reservoirs and demands in a large system." Lund Ex. 1 at 6.

The methodology of the "historic" approach has gradually fallen into disuse because it cannot be applied to multi-reservoir systems, does not account accurately for evaporation, and is inconvenient for energy production estimates. See USBR 1994 Report, Lund Ex. 2 at 2-1. The historic methodology has also been criticized "for not representing actual CVP operational practices." *Id.* CVP firm yield estimates "directly affected long-term contract amounts and negotiations, but not short-term annual sales or annual water allocations." Lund Ex. 1 at 6.

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Rather, CVP firm yield was used to "establish the expected reliable delivery capability during an extreme drought period." Andrews Decl., Doc. 309 ¶ 13. "The information derived from the yield calculation was applied to many different aspects of CVP planning and contracting." *Id.* Dr. Lund opined that such a firm yield is not currently used in operational methodology for annual water allocations. Prior to the enactment of the CVPIA, the Bureau did not use the "historic" CVP firm yield approach to annually allocate water. See Lund Ex. 1 at 7. The purpose of the "historic" approach was to give information as to the reliable amount of water that would be available during extreme conditions. See Andrews Decl., Doc. 309 ¶ 15.

It is entirely consistent for Congress to have defined "CVP yield" as a firm yield estimate, to quantify the amount of water that can be delivered by the CVP over a long period with only a very small likelihood of interruption. This fixes a reliable water supply from which to annually dedicate and use 800,000 acre-feet of CVP water for (b) (2) purposes. For contemporary operations, however, a firm yield analysis has less value. Dr. Lund and all experts¹ recognized that annual operation planning for large water systems, such as the CVP, runs simulation models a number of times during the year to examine

¹Environmental Plaintiffs' expert agreed that Interior accurately described the "historic approach." Andrews Decl., Doc. 309 ¶ 7. The Authority withdrew their witness, see January 31, 2000 RT 179:9-10, and all information he submitted, see *id.* 179:22-180:3.

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the system's within-year and multi-year performance and reliability under the range of hydrologic conditions. The Authority posits that for all proposed (b) (2) measures, Interior must conduct "a comparative analysis of project operations with and without the obligation during the seven-year drought period" to measure impacts on CVP yield. Doc. 254 at 15.

The CVPIA explicitly defines "CVP yield" without reference to Interior's historic approach to utilizing a "firm yield" estimate for the CVP. The statute does not mention firm yield. Nor does it direct Interior to utilize a specific methodology to quantify CVP yield, except as is defined by the language of (b) (2). No party disagrees that CVP yield is a finite quantity of CVP water measured in acre feet. The historic approach, when used, was not used to make any short-term allocations of water in CVP operations. Rather, it was used for long-term planning and contract negotiation. Interior abandoned use of the historic approach in 1988.

B. Future Level of Land Use

For its yield calculation, Interior utilizes a fixed future level of land use based on the year 2020. See Pl. Ex. 100 at 4. Dr. Lund testified this was a reasonable choice. See January 31, 2000 RT 117:18-22. There is no evidence that fixed future level of land use based on 2020 is arbitrary or that it is not used in water allocation planning by large California water systems.

The Authority criticizes the Interim Decision methodology

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for excluding assumptions about "applied deficiencies and the use of water remaining in storage." Doc. 254 at 13. Specifically, in past CVP operations, Interior would "take a four-year period out of the '28 to '34, where up to 25 percent, an aggregate not exceeding a hundred percent, would be used, and then using a deficiency analysis in this starting storage concept." RT January 31, 2000 at 60:7-11. Mr. Hiltz testified deficiency analyses were used prior to the passage of the CVPIA, and as late as 1988. See RT January 31, 2000 at 73:10-18. The drought of 1987-92, however, illustrated this approach was unrealistic and Interior abandoned its use. See *id.* at 73:19-20. A (b) (2) charge for retention for reservoir storage is not required by the language of the statute. Nonetheless, one is used at Shasta Reservoir amounting to 1.9 million AF. Interior's decision to revise the reservoir storage metric is within the agency's discretion. Interior has provided a well-reasoned explanation for abandoning its use of historic assumptions about applied deficiencies and use of water remaining in storage.

C. Deductions for Modified D-1400 Flows

The remaining CVP yield calculation issue is the use of modified D-1400 flows as an operational requirement on the lower American River. Interior claims that use of the modified D-1400 flows in the lower American River is required by an "other agreement" in place prior to October 31, 1992. The Authority claims that use of the modified D-1400 flows is not required by

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an agreement. The parties disagree as to the meaning of the term "other agreements" in the "CVP yield" definition. This raises an issue of law as to whether the term "other agreements" means a formal, legally enforceable contract. Arguably, Interior's legal interpretation of a statutory term, "other agreements," for the purposes of litigation, is not per se within its expertise and is not necessarily afforded deference. See *Rucker v. Davis*, __ F.3d __, 2000 WL 149415 at *6 (9th Cir. Feb. 14, 2000). Rather than submit this legal issue to the 706 expert, who lacked competence to provide a legal opinion, the Court requested additional briefing from the parties.

The American River is part of the CVP. See Pl. Ex. 113 at 8. In 1958, the State Water Resources Control Board ("SWRCB") issued Decision 893 ("D-893"), granting permits to the Bureau for storage of water at Folsom Reservoir, subject to minimum flows for fishery resources in the 250 to 500 cfs range. See *Environmental Defense Fund v. East Bay Municipal Utility District*, No. 425955 at 3 (Cal. Super. Ct. 1990), available at Doc. 287 Ex. A. In 1972, the SWRCB issued Decision 1400 ("D-1400"), which conditionally increased flows over D-893 levels up to 3000 cfs. See *id.* at 6. Implementation of the increase for D-1400 flows was subject to the condition precedent of construction of the Auburn Dam. See *id.* It is undisputed this contingency has not occurred. The Auburn Dam has not been constructed. James Snow, a former Senior Engineer for the California Department of Water Resources, opines there is

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substantial doubt that the Auburn Dam will ever be built. See Doc. 296, Snow Decl. ¶ 2. Nonetheless, if water is available to meet the D-1400 flow requirements, the Bureau has operated the lower American River in accordance with D-1400. See East Bay Municipal Dist., No. 425955 at 6-7. The flows are referred to as "modified D-1400" flows. See id.

Federal Defendants characterize the issue as whether the Department of the Interior "has the discretion under Chevron to include the so-called 'modified D-1400 flows' as part of the regulatory baseline." Doc. 291 at 1:12-14. This is not the issue. Nor is the issue, as both Federal Defendants and Environmental Plaintiffs parse it: Can the Bureau use CVP water, i.e., modified D-1400 flows, to satisfy Wild and Scenic River Act requirements. (Assumedly, under the authority of § 3406(b).) Whether or not the modified D-1400 flows are deductible from CVP yield depends solely on whether they are fishery, water quality, or other flow and operational requirements imposed by a license, permit or other agreement pertaining to the CVP under applicable state or federal law that existed on or before October 30, 1992. The issue presented is not Interior's ability, under the CVPIA, to use such water within its Chevron discretion to meet the requirements of law; but rather whether CVP water used for modified D-1400 flows is chargeable against CVP yield. It is undisputed that the modified D-1400 flows are for fishery purposes and are utilized on part of the CVP.

Federal Defendants contend that modified D-1400 flows

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should be considered in the baseline because the lower American River is part of the National Wild and Scenic River System and consequently, "it was and continues to be entirely reasonable and appropriate for the Bureau to voluntarily operate the CVP on this river to comply with the requirements of this law that the river's 'extraordinary: scenic, recreational fishery and wildlife values' be maintained." Doc. 291 at 2:15-21. The lower American River was designated part of the California Wild and Scenic Rivers System in 1972. See 46 Fed. Reg. 7484, 7484 (1981). In 1981, the "Lower American [River] from Nimbus Dam to its junction with the Sacramento River" was added to the National Wild and Scenic River System, as a "State administered component[]." *Id.*

Federal Defendants do not discuss the interrelation of a state-administered component of the National Wild and Scenic River System and the federal operation of the CVP. When the lower American River was so designated, the Secretary of the Interior stated:

Inclusion in the National System as well will have two major effects: (1) It will prevent Federal participation and assistance in the development of resource projects which would have a direct and adverse effect on the values for which the rivers have been designated (anadromous fishery resources in all cases . . .), and (2) it will require Federal land-managing agencies (primarily the U.S. Forest Service and the Bureau of Land Management) to reassess management policies, plans, regulations and contracts on lands adjacent to river segments and to conform them with the intent of Wild and Scenic River designation.

Id. *Swanson Mining Corp. v. Federal Energy Regulatory Commission*, 790 F.2d 96, 98 (D.C. Cir. 1986), holds that state-

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designated wild and scenic rivers "are to be permanently administered by state agencies without expense to the United States." *Id.* at 98 (emphasis added). Nonetheless, Federal Defendants argue that this statute gives them authority to use federal CVP resources, namely water, to maintain the fishery habitat because the lower American River is part of the National Wild and Scenic Rivers System. Section (b) (2) does not authorize deductions from CVP yield simply because a fishery, water quality, or other flow or operational requirement is prescribed by any state or federal law pertaining to the CVP. Rather, a deduction is authorized only if the (b) (2) use is required by a "license, permit, or other agreement" pertaining to the CVP under state or federal law. The evidence does not establish such a license, permit, or other agreement requires the modified D-1400 flows.

Federal Defendants argue for the deduction because the Bureau has operated the CVP with the modified D-1400 flows for many years. They allege that *Environmental Defense Fund, Inc. v. East Bay Municipal Utility District*, No. 425955, found "the Bureau was operating to meet the modified D-1400 flow standards prior to the enactment of the CVPIA in 1992." Doc. 291 at 2:6-8. The state court unpublished decision found that although the D-1400 flows are not legally binding on the Bureau, the Bureau "still operates to meet such minimum flows if water is available." *East Bay Municipal Utility District*, No. 425955 at 6. This 1990 decision recognizes that D-1400 flows were used

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prior to the CVPIA's enactment, without formal authorization by license or permit. The Bureau, in the 1992 CVP-OCAP, explained that "[a]lthough not required, current Reclamations operations attempt to satisfy criteria similar to those found in D-1400." See Pl. Ex. 113 at 51 (emphasis added). This is a partial admission that Interior did not believe it was legally (contractually) required to utilize modified D-1400 flows. Use of D-1400 flows cannot be justified as a flow or operational requirement on the theory that the decision (D-1400) was a license or permit under state or federal law. The Auburn Dam was never constructed, see Doc. 296, Snow Decl. ¶ 2, and D-893 is the operative permit authorizing use of Lower American River flows for fishery purposes, see Pl. Ex. 113 at 51. This is corroborated by the recent permit application to increase use of lower American River flows from the D-893 level. See *id.* Exs. A, C.

Federal Defendants argue that notwithstanding non-occurrence of the Auburn-Dam condition precedent, Interior's decision to operate the CVP on the American River utilizing the modified D-1400 flows is "based on 'agreements' with the California Department of Fish and Game and the U.S. Fish and Wildlife Service." Doc. 291 at 2:21-24. "Nothing in the CVPIA requires that such agreements be reduced to writing or be legally binding." Doc. 291 at 3:6-7. The Authority contends that the evidence adduced is insufficient to prove an agreement between Fish and Game and Interior to require the modified D-1400 flows.

See Doc. 287 at 1:28-2:1, 6:23.

Federal Defendants cite to deposition and trial testimony of Lowell Ploss as evidence of an agreement. When asked,

Q How long has the Bureau been operating the project in accordance with modified D-1400?

Ploss Depo., Doc. 247 at 64:5-6, Mr. Ploss testified that modified D-1400 flows use was implemented "sometime in the mid-1970's, resulting from a former agreement with the Department of Fish & Game," Ploss Depo., Doc. 247 at 64:7-9. This testimony, at least as to the date of the alleged agreement, is contradicted by other evidence in the record. A 1980 Memorandum from the United States Assistant Secretary for Fish and Wildlife Parks to the Secretary of the Interior set forth the positions of the State, the State Department of Fish and Game, and the U.S. Fish and Wildlife Service as to fish habitat in the lower American River, observing that the position of the Fish and Game was uncertain. See Doc. 291, Ex. B at 2.

When asked, "does the Bureau consider itself obligated by an agreement of some kind to operate the project according to modified D-1400," Mr. Ploss responded:

We feel that to be an obligation because of the mutual agreement with California Department of Fish and Game and US Fish and Wildlife Service, with the understanding that at any time the flow could be imposed by the State Water Resources Control Board if the California Department of Fish and Game petitioned the Board.

Ploss Depo., Doc. 247 at 64:25-65:3. The questioner did not ask when such an understanding was reached; what its terms were;

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duration; or the authority for the agreement. Federal Defendants also cite Mr. Ploss' testimony from the first evidentiary hearing:

Q Mr. Ploss, was this [Government's Exhibit 4] one of the documents relied on by the Department of the Interior for the Interim Decision?

A Yes.

See July 29, 1999 RT at 26:15-17. Government's Exhibit 4 is an October 2, 1984 internal memorandum to the U.S. Assistant Secretary of Fish and Wildlife and Parks from the Assistant Secretary of Water and Science regarding the Auburn-Folsom South Unit of the CVP. See Doc. 291 at Ex. B. This document discusses the existence of a Task Force and a Working Group that were studying, *inter alia*, the "'Lower American Flow' issue." See Doc. 291 Ex. B at 1. No resulting "agreement" is identified.

In their Reply, Federal Defendants cite to paragraph five (5) of Mr. Bowling's Declaration:

[t]he California Department of Fish and Game (DFG), United States Fish and Wildlife Service (FWS), and National Marine Fisheries Service (NMFS) have expressed the need for higher minimum flows in the American River. Given that CDFG, FWS and NMFS have requested the higher flows, it is my understanding that the USBR has generally operated to modified D-1400 flows except in very dry conditions.

Federal Defendants argue, "[t]his is certainly an 'agreement' within the meaning of the CVPIA." See Doc. 298 at 3:5-6. This is not direct evidence of an agreement. It references a "request" by the DFG, FWS, and NMFS that D-1400 flows are needed

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1 to maintain the fishery habitat and Interior's general response
2 to use modified D-1400 flows.

3 At the January 31, 2000 hearing, Mr. Bowling testified,
4 as Interior's designated expert, that he understood, absent
5 anything else, D-893 continues to govern the minimum flows in the
6 lower American River. See January 31, 2000 RT at 96:19. As to
7 whether or not there was an informal "agreement:"

8 Q. And, to your knowledge, is this something that is
9 done independently by the Bureau or because there
10 is some kind of an agreement in place?

11 A. I would not say that -- again, as I've said, there
12 is no formal agreement; however, I wouldn't say
13 that we'd do it independently. That, as well --
14 there are many operating decisions that we make,
15 and the lower American River is just one, and we do
16 rely on the input from other agencies in making
17 those decisions.

18 Q. Would it be a fair statement that you are advised
19 by these agencies of the need for the increased
20 flows and then you make a determination whether to
21 do that each year?

22 A. They will provide that advice. We might provide
23 reasons for not being able to do everything they
24 would like and then we might agree upon an
25 operation that provides maybe not optimum flow, but
26 a minimized impact on fish and wildlife.

Q. And that's year to year?

A. Year to year, and sometimes day to day.

January 31, 2000 RT at 99:8-25. On cross-examination, Mr.
Bowling was asked:

Q. And isn't it also true that you had a verbal
agreement or understanding or a meeting of the
minds with the Cal Fish and Game agency and the
U.S. Fish and Wildlife Service to provide those

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D-1400 flows, or modified D-1400 flows, whenever conditions at Folsom Reservoir permitted?

A. I can't say that I had that meeting of the minds.

January 31, 2000 RT at 110:15-20. He further testified:

What I can say is that we were aware that the agencies involved would have preferred to see those flows, or even higher flows, and, therefore, we worked with them at times to provide higher flows than D-893 would call for.

January 31, 2000 RT at 111:3-7 (emphasis added). Mr. Bowling could not testify there was an agreement. The evidence does not preponderate to establish that there was a definite and certain agreement pertaining to the CVP under applicable state or federal law requiring use of modified D-1400 flows for fishery, water quality, or other flow and operational requirements, existing as of October 30, 1992.

The evidence establishes that long before and as of October 30, 1992, State DFG, the Bureau, and FWS were all concerned about sufficiency of water flows for fish habitat in the lower American River and requested and at times received modified D-1400 flows. From some time during the 1980s to the present, Interior has voluntarily provided modified D-1400 flows to support fishery and Scenic Rivers Act purposes in the lower American River. This use, although lawful, and within Interior's discretion, has not been proved to be required by an "other agreement" pertaining to the CVP under applicable state or federal law. It was unlawful to deduct the modified D-1400 flows in the calculation of CVP yield.

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After deduction of modified D-1400 flows, Interior calculated CVP yield as 5,791,000 AF. See Pl. Ex. 100 at 2, A-4. Under modified D-1400, lower American River flows are 3000 cfs. See *id.* at A-4. D-893 fixes lower American River flows at 250-500 cfs. See *id.* Interior's calculation of CVP yield must be modified to add the difference in acre-feet of CVP water from 3000 cfs to 250-500 cfs for the period of the year modified D-1400 flows are utilized. Interior SHALL PROVIDE THE CALCULATION within ten (10) days following service of this decision. The resulting figure, 5,791,000 AF plus modified D-1400 flows, minus D-893 flows is the lawful quantity of CVP yield defined by Section 3406(b)(2).

IV. INTERIOR'S CVP YIELD DEDUCTIONS FOR (b)(2) MEASURES

A. PRELIMINARY MATTER

On February 8, 2000, the Authority submitted a supplemental memorandum referencing a recent case: *Firebaugh Canal Co. v. United States*, Nos. 95-15300, 95-16641, 2000 WL 126581 (9th Cir. Feb. 4, 2000), see Doc. 312, which is claimed to govern Interior's ability to implement and measure (b)(2) water uses. It argues that *Firebaugh Canal* confirms that Interior lacks discretion as to how measure (b)(2) actions, and, consequently, all proposed (b)(2) actions must be modeled based on the 1928-34 hydrology. See Doc. 312 at 1:16-18. On February 10, 2000, Environmental Plaintiffs filed a motion to strike Plaintiffs' brief, or in the alternative, a response, see Doc.

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313, to which Plaintiffs replied, see Doc. 314.²

In an abundance of caution, the references to *Firebaugh Canal*, slip opinion pages 1289-91, are treated. *Firebaugh Canal* discusses well-established principles of statutory interpretation, but as Environmental Plaintiffs correctly note, the case makes no new pronouncements. There, interpretation of the San Luis Act, Pub. L. No. 86-488, 74 Stat. 156 (1960), was in dispute. Congressional intent was "clear from the statutory language." *Firebaugh Canal*, 2000 WL 126581 at *5. *Firebaugh Canal* does not address section 3406(b)(2), or any part of the CVPIA. It only interprets the San Luis Act. This case focuses on the interpretation of the CVPIA term "CVP yield." The Authority argues that CVP yield is a term of art and although defined by the statute, Interior's "historical meaning" of "yield" must be applied. Federal Defendants counter that since Congress defined "CVP yield," the definition should be applied exactly as written. No language of (b)(2) states that environmental use of CVP water must first be modeled using an obsolete CVP firm yield methodology. *Firebaugh Canal*'s pronouncement that an Agency must follow the clearly expressed intent of Congress, which obviates the need "to consider the Agency's interpretation of the statute," or afford deference to the Agency, *id.* at *5, provides no insight as to the statutory

²Federal Defendants also objected by fax to the Supplemental Memorandum. The objections were not filed and therefore do not constitute part of the record.

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interpretation that must be performed in this case. To the contrary, Firebaugh Canal found the Agency's discretion was re-authorized by subsequent Congressional actions on appropriations bills, which considered alternative options to an inceptor drain. See *id.* at *8.

B. MEASUREMENT OF CVP YIELD DEDICATED AND MANAGED FOR (b) (2) USES

The CVPIA requires Interior to "dedicate and manage annually eight hundred thousand acre-feet of Central Valley Project yield for the primary purpose of implementing the fish, wildlife, and habitat restoration purposes and measures authorized by this title." CVPIA § 3406(b) (2) at 4715. The statute provides no direction to Interior how to measure the CVP water used for annual (b) (2) purposes. The Authority contends that for each (b) (2) use, Interior must conduct a firm yield analysis to determine the impact the measure would have had assuming 1928-34 conditions and 1992 CVP facilities. Interior argues that (b) (2) modeling should be based on each year's existing hydrologic conditions.

The Authority contends that in the Interim Decision, Interior measures yield dedicated and managed under (b) (2) in a manner that ignores the statutory definition of "yield." See Doc. 254 at 10. It claims logic "demands" that if CVP yield is defined as the delivery capability of the CVP during the 1928-34 drought period, the measurement of how much CVP yield has been used for an authorized project purpose depends on comparison of

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each intended (b) (2) use under 1928-34 conditions, with and without the measure, based on hypothetical operation of the then-existing (1992) CVP facilities under 1928-34 drought-period conditions. See Doc. 254 at 8-9.

Question 1(f) inquires about the effect of historical firm yield modeling. In her declaration, Ms. Andrews explains that Plaintiffs' position would "fix very high water costs to specific b(2) [sic] actions regardless of the annual hydrological condition." Andrews Decl., Doc. 309 ¶ 25. The result would "virtually always attribute a higher cost to releasing water for b(2) [sic] measures," the practical effect of which would be "limiting what b(2) [sic] measures can be implemented within the 800,000 acre-foot cap in all years." Andrews Decl., Doc. 309 ¶ 26.

In practical terms, the Authority's interpretation results in a lower impact on water users in almost all years, by requiring the use of more CVP water for any (b) (2) purpose, to satisfy an extreme-drought-condition model without regard to current-year hydrological conditions. This ignores that the CVPIA "marks a shift in reclamation law modifying the priority of water uses." *O'Neill v. United States*, 50 F.3d 677, 686 (9th Cir. 1995). *O'Neill* found explicit Congressional intent in the CVPIA to achieve a reasonable balance among environmental water priorities and competing demands for use of CVP water. See CVPIA § 3402(a)-(f) at 4706. The annual dedication of 800,000 AF of the statutorily-defined CVP yield to environmental purposes is a

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1 drastic front-end reallocation of the reliable supply of CVP
2 water. This was a compromise political decision to reallocate
3 800,000 AF of CVP water to the environment for (b) (2) purposes.³

4 CVP yield is defined to provide a reliable supply of CVP
5 water for dedication and management annually for (b) (2) purposes.
6 If Congress had intended that an historic firm yield methodology,
7 no longer used by Interior, be used so that less than 800,000 AF
8 of actual CVP water be dedicated and managed each year for (b) (2)
9 purposes, it could easily have said so. Other provisions of the
10 CVPIA evidence Congress knew how to provide express protections
11 for water users when it so intended. See CVPIA § 3406 (b) (1) (B)
12 at 4715 (authorizing the Secretary to use CVP water to protect
13 anadromous fish only to the extent that the measures the
14 Secretary uses "do not conflict with fulfillment of the
15 Secretary's remaining contractual obligations to provide Central
16 Valley Project water for other authorized purposes"); *id.* at §
17 3406 (b) (1) (C) (mandating that the programs and plans required by
18 the CVPIA be "developed and implemented in a way that avoids
19 inconsistent or duplicative obligations from being imposed upon
20 Central Valley Project water and power contractors"); *id.* at
21 4723, § 3406 (d) (1) ("In implementing this paragraph, the
22 Secretary shall endeavor to diversify sources of supply in order

23 ³CVPIA Section 3402 (f) expresses among the CVPIA purposes:

24 to achieve a reasonable balance among competing demands
25 for use of Central Valley Project water, including the
26 requirements of fish and wildlife, agricultural, munic-
ipal, and industrial power contractors.

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to minimize possible adverse effects upon Central Valley Project contractors."); id. at 4730, § 3408(j) (authorizing the Secretary to develop plans to "minimize adverse effects, if any, upon existing Central Valley Project water contractors"). These sections, and the others within the CVPIA that expressly protect contractors, militate against a finding that Congress' silence in (b) (2) expresses intent that a comparative measurement methodology be used that would significantly reduce 800,000 AF of the actual amount of CVP water that could be devoted in most years to (b) (2) purposes.

The language of (b) (2) makes no reference as to how to measure the (b) (2) 800,000 AF annual dedication and use of CVP yield. CVP yield, as defined, is a reliable water supply, approximately 6 million AF of CVP water. Of this total supply, 800,000 AF are to be annually applied for (b) (2) purposes. How and for what (b) (2) purposes the water is to be used is committed to Interior's discretion.

This is a highly technical area requiring application of principles of civil engineering, hydrology, water management, fishery biology, and other environmental sciences. Congress' failure to specifically prescribe how to measure the amount of CVP yield used each year for (b) (2) purposes, cedes the interpretation and implementation of accounting for (b) (2) uses to the good faith discretion and expertise of Interior, its Bureau of Reclamation, and the U.S. Fish and Wildlife Service in consultation with the California Department of Water Resources.

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This choice to relegate to Interior's discretion quantification of the annual amount of CVP yield dedicated and used for (b) (2) purposes is lawful. Interior's Interim Decision methodology for measuring annual (b) (2) uses of CVP yield is not unlawful, arbitrary, or capricious.

IV. DID INTERIOR ACCURATELY CALCULATE THE AMOUNT OF WATER USED FOR THE 1999 WATER YEAR (b) (2) ACTIONS?

Questions two through six address Environmental Plaintiffs' allegations that Interior made several modeling errors that result in an over-statement of the 1999 CVP yield-to-date dedicated to (b) (2) purposes by at least 57 TAF. See Doc. 252 at 3. According to the summary of use provided by Interior, from March 1 through September 30, 1999, it dedicated 568,000 acre-feet of CVP yield for (b) (2) purposes. See Pl. Ex. 101 at 1. Of that amount, 164,000 AF were used for "upstream actions" and 404,000 AF were used for Delta actions. See Pl. Ex. 101 at 1. Interior will dedicate and manage an additional 232,000 AF of CVP yield for (b) (2) measures by the end of February 2000, the end of the water year. See Pl. Ex. 101 at 2. Interior dedicated 164,000 AF of CVP yield to upstream actions in two waterways: Clear Creek and the Stanislaus River. See Pl. Ex. 101 at 3. Questions 2-5 address the upstream actions.

As to the Delta actions, Interior alleges that "[b]ecause the 1999 fishery actions, the RSA obligations and the WQCF actions are so closely intertwined, allocation of (b) (2) yield for specific Delta actions could not be specified." Pl. Ex. 101

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at 4. The Authority contends that Interior can break out and quantify the amount of CVP water used for each Delta action from the total amount. This is the subject of Question 6. The short answer is that reasonable estimates of use for each action can be quantified.

A. Question 2: Does the CVP Forecast Model correctly account for Clear Creek flows during the 1999 water year?

Dr. Lund testified that the forecast model did not correctly account for Clear Creek flows during the 1999 water year. See January 31, 2000 RT 45:21-46:1. This confirmed the contention of the Environmental Plaintiffs' expert, Mr. Rosekrans. The Federal Defendants did not offer rebuttal. The experts agreed that this error was without consequence, except below Whiskeytown Dam.

1. Question 2a: Please explain how the Model accounts for changes that result from actual operational changes the Bureau makes in its operation of Clear Creek.

In his report, Dr. Lund stated that the 1999 Forecast Model increased flows to Clear Creek, but did not account for the increased flows further down stream. See Lund Ex. 1 at 9. Rather, the models assumed these flows as "evaporat[ing]," rather than entering the Sacramento River, "as they do in reality." Id.

2. Question 2b: When the Bureau makes an actual change in its operation of Clear Creek, does the Model reflect whether such a change affects the amount of water in the Sacramento River downstream of Clear Creek?

Dr. Lund answered this question, "No." Lund Ex. 1 at 9.

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The 1999 Forecast Model does not reflect downstream changes in flows that would occur from increases in Clear Creek flows. See *id.*

3. Question 2c: Did all releases to Clear Creek during 1999 water year result in increased total CVP releases from all sources into the Sacramento River? Is this accurately reflected in the Forecast Model?

Dr. Lund opined that "no compensating reductions were made in releases from other CVP reservoirs in response to increased Clear Creek releases." Lund Ex. 1 at 9. He noted, however, that the tables provided by A. Spreck Rosekrans showed reduced Keswick releases and that at the time of the report, he was unable to resolve this discrepancy. See *id.* In the final analysis, this did not result in a net difference in (b) (2) use of CVP yield for the 1999 water year.

- C. Question 3: Did the release of water from the Spring Creek Tunnel, rather than to Clear Creek during 1999, affect annual delivery capability of the CVP during the 1999 water year? If so, how?

Dr. Lund testified that during 1999, the release of water from the Spring Creek Tunnel, rather than to Clear Creek did not affect the annual delivery capability of the CVP during the 1999 water year. See January 31, 2000 RT 51:6-13. After studying the issue, he opined that the estimate for Spring Creek releases was accurate as presented. See *id.* 53:7-8.

- D. Question 4: Interior has calculated that it used 52,000 acre-feet of CVP water for increased flows in Clear Creek below Whiskeytown Dam for (b) (2) purposes in water year 1999. Is this

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calculation accurate under Interior's (b) (2) accounting methodology? Please explain.

Interior calculated that below Whiskeytown Dam, fifty-two thousand (52,000) AF of (b) (2) water were used to increase Clear Creek flows. See Pl. Ex. 101 at 3. Dr. Lund stated that Interior's accounting for the Clear Creek measures was not correct. See January 31, 2000 RT 46:1. "[F]or this modeling error in terms of the accounting, then I think you would reduce the 52,000 acre feet by 39,000 acre feet." Id. 49:16-18. Environmental Plaintiffs' expert held a similar opinion. Federal Defendants' cross-examination produced no credible opposing view. Interior's calculation of use for Clear Creek flows must be reduced by 39,000 AF.

B. Question 5: Interior has calculated that it used 112,000 acre-feet of CVP water for (b) (2) purposes in the Stanislaus River. Is this calculation accurate under Interior's (b) (2) accounting methodology?

As to the calculation for Stanislaus River releases, Dr. Lund testified:

Q. And so now I would like to turn to the Stanislaus River question. The 112,000 acre feet of CVP water for (b) (2) purposes, first of all, do you understand what those purposes were that Stanislaus River flows were utilized?

A. The Bureau's accounting had a list of them and mentioned them.

Q. And were you able to determine whether the accounting was accurate?

A. It appeared to me that it was accurate. When I discussed this particular issue with any of the

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parties, the technical representatives of the parties that I spoke with, none of them gave me any reason to look into the matter further.

Q. All right. So you are satisfied that the charge for (b) (2) purposes for Stanislaus River actions of 112,000 acre feet was proper and correct?

A. As I understand it, yes.

January 31, 2000 RT 53:10-54:1. The parties have not objected to Dr. Lund's analysis. The deduction for Stanislaus River releases is accurate.

F. Question 6: Interior asserts that because the 1999 Fishery Actions, the Endangered Species Act obligations and Water Quality Control Plan actions are so closely intertwined, and occurred before the adoption of the Interim Accounting Decision, the accounting of the dedication and management of (b) (2) yield for those specific actions cannot be specified "after-the-fact" for the 1999 water year. Is it possible, as a matter of reasonable engineering practice and hydrology, to separately account for and quantify the amount of CVP water used for each of these purposes in the 1999 water year?

Dr. Lund provided the explanation that (b) (2) allocations for separate Delta actions could be made:

Q. And you believe, one, that actions, to the extent that they are not serving the same purpose, that the amount of water used for such an action can be accounted for, is that correct?

* * * *

A. I think one could develop an accounting system, yes.

January 31, 2000 RT 54:10-13, 55:18. Dr. Lund explained his answer as follows:

If you had two actions that both overlapped in their

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effects on delta pumping capacity, they both reduced pumping ability at the same time. We have actions like that all the time in projects where we have to make some accounting. Financial accounting is a good example, where, if two communities get together and they build a treatment plant, there are economies of scale, so there are always overlapping of costs, so we have developed accounting methods for dividing those costs up. They are always subject to some dissatisfaction, but we, nevertheless, find a way to cope with them.

Id. 55:3-13. Interior shall re-calculate the Delta actions and separately account for the amount of (b) (2) water used for each. The resulting accounting should not change the amount of CVF yield used for the combined actions.

G. DID INTERIOR ABUSE ITS DISCRETION IN CHANGING THE CUT-OFF DATE FOR USE OF THE "CHANGE OF STORAGE METRIC?"

Environmental Plaintiffs allege that Interior acted arbitrarily when it established January 31 as the cut-off date for use of the upstream action "change of storage metric." Doc. 252 at 10) This contention gave rise to Question 7.

Question 7: Interior has decided to use January 31 as the cut-off date for use of the upstream action "change of storage metric."

Dr. Lund addressed this issue as follows:

Q. Is there, in your opinion, an ideal cutoff date for the upstream action change of storage metric?

A. I see a range of reasonable dates that would --

Q. There isn't a best date?

A. I don't see one. I certainly think that one would not want to go earlier than January 31st because of the availability of snow pack -- more detailed snow pack information. There doesn't seem to be any reason to make the date any earlier than January

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1 31st.

2 January 31, 2000 RT 57:13-21. He also testified that for
3 contract allocations and upstream actions, January 31 was a good
4 date to permit early planning. He estimated there would be more
5 information by the end of February, but would not fix the date
6 past March 1. Interior's choice within a range of reasonable
7 alternatives is entitled to deference. Interior did not act
8 arbitrarily or abuse its discretion when it established January
9 31 as the cut-off date. Environmental Plaintiffs' challenge does
10 not show arbitrary, capricious, or unlawful administrative action
11 in choosing January 31 for the cut-off date for use of upstream
12 actions change of storage metric.

13
14 V. CONCLUSION

15 Interior's interpretation of the definition of CVP yield,
16 except for the deduction for the modified D-1400 flows in
17 calculating CVP yield, was lawful, not arbitrary or capricious.
18 The minimum use of water year carryover storage in Shasta
19 Reservoir of 1.9 million acre-feet is imposed by terms or
20 conditions of licenses and permits pertaining to the CVP and
21 other state and federal laws as of the CVPIA enactment date. The
22 use of modified D-1400 flows was not authorized by a license,
23 permit, or other agreement pertaining to the CVPIA. Interior
24 should have used the D-893 flows in its calculation of CVP yield.
25 It shall increase CVP yield by the annual difference in acre-feet
26 of water that results from using D-893 flows instead of modified

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D-1400 flows.

Interior did not act unlawfully, arbitrarily, or capriciously in modeling the proposed 1999 (b) (2) actions on 1999 hydrologic conditions. It was not required to use a comparative 1928-34 period analysis to measure the impact of each (b) (2) action in quantifying CVP yield used for (b) (2) purposes. Congress chose to allocate 800,000 AF of CVP water to (b) (2) purposes from the reliable supply of "CVP yield," as it expressly and knowingly defined that term. This appropriation of CVP water is a practical consequence of the CVPIA's purpose in reallocating CVP water among the competing demands for its use.

In the (b) (2) accounting for 1999, the calculation of the Clear Creek (b) (2) action below Whiskeytown Dam SHALL BE REDUCED by 39,000 AF, resulting in a net of 13,000 AF used for (b) (2) purposes for such action, rather than 52,000 AF. The calculation of Stanislaus River (b) (2) releases at 112,000 AF is correct. Interior SHALL ACCOUNT for the individual (b) (2) deductions for each Delta action. Interior did not abuse its discretion when it decided to use January 31 as the cut-off date for the upstream actions storage metric.

In light of this additional evidence, the requisite showing of likely success on the merits has not been made.

For the foregoing reasons, IT IS ORDERED:

1. The preliminary injunction is DISSOLVED;
2. Interior SHALL RECALCULATE CVP yield, substituting the D-893 flows for the modified D-1400 flows. The final calculation

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SHALL BE SUBMITTED within ten (10) days following service of this decision;

3. The accounting for use of CVP yield for (b) (2) purposes for the 1999-2000 water year is, with the modifications discussed above, lawful and in compliance with § 3406(b) (2), and a reasonable exercise of Interior's statutorily authorized discretion.

DATED: March 10, 2000



Oliver W. Wanger
UNITED STATES DISTRICT JUDGE

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FILED

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CLERK OF DISTRICT COURT
EASTERN DISTRICT OF CALIF.
AT FRESNO
BY DEPUTY *OK*

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF CALIFORNIA

SAN LUIS & DELTA MENDOTA WATER
AUTHORITY,

Plaintiff,

PIXLEY IRRIGATION DISTRICT, et
al.,

Plaintiffs-in-
Intervention,

v.

UNITED STATES OF AMERICA, et
al.,

Defendants.

SAVE THE SAN FRANCISCO BAY
ASSOCIATION, et al.,

Plaintiffs,

v.

UNITED STATES DEPARTMENT OF THE
INTERIOR, et al.,

Defendants.

Consolidated Cases:

CIV-F-97-6140 OWW

CIV-F-98-5261 OWW

ORDER RE COMPENSATION OF
EXPERT PURSUANT TO FEDERAL
RULE OF EVIDENCE 706

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1 The Court has received the statement of Dr. Jay R. Lund,
2 expert appointed under the auspices of Federal Rules of Evidence
3 706. The Court has also received the submission of the
4 Environmental Plaintiffs concerning their inability to share in
5 payment of the costs of the expert.

6 Based on the legal authority submitted and Plaintiff's
7 financial resources, substantial justification is shown to excuse
8 payment of a pro rata share of the costs of the expert by
9 Environmental Plaintiffs.

10 The parties shall have ten days to review Dr. Lund's
11 statement and to raise any issue concerning payment in accordance
12 with the following order.

13 IT IS ORDERED that the statement for expert witness fees
14 and actual expenses submitted by Dr. Jay R. Lund shall be paid by
15 the following parties in the following percentages:

16 The Authority Plaintiff	One-Third
17	
18 All Other Plaintiffs in 19 Intervention except the 20 Environmental Parties	One-Third
21 The United States of America	One-Third

22 If no objection is filed on or before April 20, 2000, the
23 parties shall, within an additional twenty days, submit payment
24 directly to Dr. Lund with a confirmation of payment to be filed
25 with the Court at the time payment is transmitted to Dr. Lund.
26

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FURTHER ORDERED that the expert compensation shall be a recoverable cost.

DATED: March 10, 2000.



Oliver W. Wanger
UNITED STATES DISTRICT JUDGE

san luis order one

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RECEIVED
FEB 18 2000

1507 Lemon Lane
Davis, CA 95616
(530) 752-5671
rlund@ucdavis.edu
15 February 2000

Honorable Oliver W. Wanger
United States District Court
Eastern District of California
1130 "O" Street, Room 5000
Fresno, CA 93721

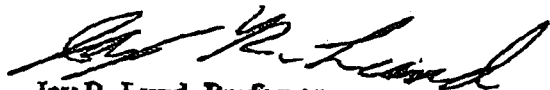
Dear Judge Wanger:

Enclosed is an invoice for my time and expenses regarding the cases CIV-F-97-6140 and CIV-F-98-5261. The total invoice amount is \$13,948.00.

I hope this work is helpful to the Court. It was an honor to work for the Court and the experience has provided me with another reason to recommend the importance of their social science and humanities coursework to my engineering students.

If you have any questions on this invoice or require further information from me, please let me know.

Sincerely,



Jay R. Lund, Professor
Department of Civil and Environmental Engineering

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:04 MAR 13, 2000

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Invoice for Professional Services and Expenses

For assistance to US District Court, Eastern District of California
CIV-F-97-8140 OWW and CIV-F-98-5261 OWW

Dr. Jay R. Lund 1607 Lemon Lane Davis, CA 95616
(530) 752-5671

Item SSN# 221-32-3910

Time:	Day	Hours	Unit Cost/hr.	Amount
Jay R. Lund	Jan. 19	4	\$100	
	20-Jan	9		
	21-Jan	8		
	22-Jan	14		
	23-Jan	14		
	24-Jan	8		
	26-Jan	3		
	27-Jan	8		
	28-Jan	4		
	29-Jan	8		
	30-Jan	7		
	31-Jan	13		
	1-Feb	1		
	12-Feb	12		
Total Time:		114 hours		\$11,400.00

Expenses:

Legal Assistance in Deposition of Court Appointed Expert (copy of statement enclosed)	\$2,128.00
Technical Assistance (Dr. Marion Jenkins, 1 hour @\$50/hr)	\$50.00
Personal Car mileage 110 mile @ \$0.30/mi.	\$33.00
Parking (for deposition and downtown meetings)	\$23.25
Copies (450 pp copies@\$0.05 + 10 overheads@0.40)	\$28.50
Gas	\$11.00
Car Rentals Jan 30 and Jan 31	\$116.37
3-Feb	\$70.30
Hotel Fresno Jan 30	\$89.60
Total Expenses	\$2,548.02

Total Cost: \$13,948.02

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TEL NO: 4987226

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**MENNEMEIER, GLASSMAN
& STROUD LLP**

980 9th Street • Suite 1700 • Sacramento, California 95814-2736
Telephone 916-553-4000 • Facsimile 916-553-4011

Direct Dial
916-551-2588

February 9, 2000

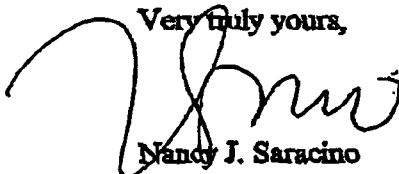
Professor Jay Lund
Department of Civil and
Environmental Engineering
University of California, Davis
Davis, CA 95616

Re: Defend Deposition of Court Appointed Expert
Our File No. 204.01

Dear Professor Lund:

Enclosed is our statement for services and costs rendered during January in this matter. This is the final bill for my representation in this matter. Thank you again for asking me to represent you. I really enjoyed working with you. If you have any questions regarding this statement, please do not hesitate to call.

Very truly yours,



Nancy J. Saracino

NJS/cat
Enclosure

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05 MAR 13, 2000

TEL NO: 4987226

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MENNEMEIER, GLASSMAN & STROUD LLP

980 9th Street, Suite 1700
Sacramento, CA 95814-2737
916-553-4000

Federal Tax ID #91-1842066

February 3, 2000

Professor Jay Lund
Dept. of Civil & Environ. Eng.
University of CA, Davis
Davis CA 95616

Invoice # 3753

In Reference To: Defend Deposition of Court Appointed Expert
File No. 204.01

PROFESSIONAL SERVICES

	<u>Hours</u>	<u>Amount</u>
01/25/00 NJS Review materials related to San Luis and Delta-Mendota lawsuit in preparation for defending Dr. Lund's deposition; draft letter to interested parties and counsel regarding my representation; call from Edward Gee at Interior regarding deposition; review Dr. Lund's report and compile information regarding expert witness depositions for his information.	1.70	272.00
01/26/00 NJS Review Dr. Lund's report, the US Dept. of Interior Decision on Implementation of CVPLA, the calculation of CVP yield, the DOI responses to Judge Wanger's questions and the law on court-appointed experts in preparation for defending Dr. Lund's deposition.	4.60	736.00
01/27/00 NJS Work with Dr. Lund to prepare for his deposition and defend his deposition at KMTG.	6.50	1,040.00
01/29/00 NJS Call court reporter regarding getting e-mailed copies of expert depositions as agreed on Thursday; call Tom Birmingham regarding same; e-mail depositions to Jay and discuss same with him.	0.50	80.00
FOR PROFESSIONAL SERVICES RENDERED	13.30	\$2,128.00

MENNEMEIER, GLASSMAN & STROUD LLP

980 9th Street, Suite 1700
Sacramento, CA 95814-2737
916-553-4000

Federal Tax ID #91-1842066

February 3, 2000

Professor Jay Lund
Dept. of Civil & Environ. Eng.
University of CA, Davis
Davis CA 95616

Invoice # 3753

In Reference To: Defend Deposition of Court Appointed Expert
File No. 204.01

PROFESSIONAL SERVICES

		<u>Hours</u>	<u>Amount</u>
01/25/00	NJS Review materials related to San Luis and Delta-Mendota lawsuit in preparation for defending Dr. Lund's deposition; draft letter to interested parties and counsel regarding my representation; call from Edward Gee at Interior regarding deposition; review Dr. Lund's report and compile information regarding expert witness depositions for his information.	1.70	272.00
01/26/00	NJS Review Dr. Lund's report, the US Dept. of Interior Decision on Implementation of CVPIA, the calculation of CVP yield, the DOI responses to Judge Wanger's questions and the law on court-appointed experts in preparation for defending Dr. Lund's deposition.	4.60	736.00
01/27/00	NJS Work with Dr. Lund to prepare for his deposition and defend his deposition at KMTG.	6.50	1,040.00
01/29/00	NJS Call court reporter regarding getting e-mailed copies of expert depositions as agreed on Thursday; call Tom Birmingham regarding same; e-mail depositions to Jay and discuss same with him.	0.50	80.00
FOR PROFESSIONAL SERVICES RENDERED		13.30	\$2,128.00